

इंटरनेट

मानक

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IS 15933 (2011): Rubber and Plastics Hoses - Hose Sizes, Minimum and Maximum inside Diameters, and Tolerances on Cut-To-Length Hoses [PCD 13: Rubber and Rubber Products]



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भारतीय मानक

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*Indian Standard*

RUBBER AND PLASTICS HOSES — HOSE SIZES,  
MINIMUM AND MAXIMUM INSIDE DIAMETERS,  
AND TOLERANCES ON CUT-TO-LENGTH HOSES

ICS 23.040.70

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**BUREAU OF INDIAN STANDARDS**  
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NEW DELHI 110002

## NATIONAL FOREWORD

This Indian Standard which is identical with ISO 1307 : 2006 'Rubber and plastics hoses — Hose sizes, minimum and maximum inside diameters, and tolerances on cut-to-length hoses' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendation of the Rubber and Rubber Products Sectional Committee and approval of the Petroleum, Coal and Related Products Division Council.

This standard is being published to align the procedure of measurement of bore diameters and length of hoses along with tolerances in line with International Standard on the subject. .

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In reporting the results of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'.

*Indian Standard*

**RUBBER AND PLASTICS HOSES — HOSE SIZES,  
MINIMUM AND MAXIMUM INSIDE DIAMETERS,  
AND TOLERANCES ON CUT-TO-LENGTH HOSES**

**1 Scope**

This International Standard specifies the sizes of rubber and plastics hoses and the minimum and maximum inside diameters permitted for each hose size. For this purpose, hoses are divided into four types according to the process by which they are manufactured. The standard also specifies tolerances on cut-to-length rubber and plastics hoses for industrial and automotive applications. This standard is intended to be used with the relevant hoses product standard unless there is justification for using a different hose size or unless a hose size needs a different inside-diameter range for a particular application.

**2 Hose sizes and ID tolerances by manufacturing type**

The sizes of rubber and plastic hoses and their respective inside-diameter ranges shall be in accordance with Table 1. Four types are specified, according to the process used to manufacture them:

- type A: hoses built using a rigid mandrel for inside-diameter control;
- type B: hoses built using a flexible mandrel for inside-diameter control (plus plastic hydraulic hoses made with or without a mandrel);
- type C: hoses built without using a mandrel (non-mandrel-built);
- type D: flexible extruded plastics hoses (type D does not include spiral-reinforced plastics suction and discharge hoses, which are classified as type C).

Table 1 — Hose sizes and inside-diameter tolerances

Nominal size	Minimum and maximum inside-diameters							
	mm							
	Type A Built on rigid mandrel		Type B Built on flexible mandrel		Type C Non-mandrel-built (standard tolerance)		Type D Extruded plastic Non-mandrel-built (tight tolerance)	
	min.	max.	min.	max.	min.	max.	min.	max.
3,2	3,2	3,8	N/A	N/A	N/A	N/A	3,0	3,4
4	4,0	4,8	4,0	4,8	3,4	4,6	3,7	4,3
5	4,6	5,4	4,6	5,4	4,2	5,4	4,7	5,3
6,3	6,2	7,0	6,2	7,0	5,6	7,2	6,0	6,6
8	7,7	8,5	7,7	8,5	7,2	8,8	7,7	8,3
10	9,3	10,1	9,3	10,1	8,7	10,3	9,7	10,3
12,5	12,3	13,5	12,3	13,5	11,9	13,5	12,2	12,8
16	15,5	16,7	15,5	16,7	15,1	16,7	15,7	16,3
19	18,6	19,8	18,6	19,8	18,3	19,9	18,4	19,6
20	19,6	20,8	19,6	20,8	19,3	20,9	N/A	N/A
25	25,0	26,4	25,0	26,4	24,2	26,6	24,4	25,6
31,5	31,4	33,0	31,4	33,0	30,2	33,4	30,9	32,1
38	37,7	39,3	37,7	39,3	36,5	39,7	37,4	38,6
40	39,7	41,3	39,7	41,3	38,5	41,7	N/A	N/A
50	49,4	51,0	N/A	N/A	48,1	51,6	N/A	N/A
51	50,4	52,0	N/A	N/A	49,1	52,6	50,2	51,8
63	63,1	65,1	N/A	N/A	61,5	65,5	62,2	63,8
76	74,6	77,8	N/A	N/A	74,2	78,2	75,0	77,0
80	78,6	81,8	N/A	N/A	78,2	82,2	N/A	N/A
90	87,3	90,5	N/A	N/A	N/A	N/A	N/A	N/A
100	100,0	103,2	N/A	N/A	99,4	103,9	N/A	N/A
125	125,4	128,6	N/A	N/A	124,8	129,3	N/A	N/A
150	150,4	154,4	N/A	N/A	150,2	154,7	N/A	N/A
160	N/A	N/A	N/A	N/A	162,9	167,4	N/A	N/A
200	200,7	205,7	N/A	N/A	200,2	206,2	N/A	N/A
250	251,0	257,0	N/A	N/A	251,0	257,0	N/A	N/A
305	301,8	307,8	N/A	N/A	301,8	307,8	N/A	N/A
315	314,5	320,5	N/A	N/A	N/A	N/A	N/A	N/A
350	N/A	N/A	N/A	N/A	351,6	359,6	N/A	N/A
400	N/A	N/A	N/A	N/A	402,4	410,4	N/A	N/A

N/A = Not available.

### 3 Tolerances on length

The tolerances on cut-to-length hoses shall be in accordance with Table 2.

**Table 2 — Tolerances on cut lengths of hose**

<b>Length mm</b>	<b>Tolerance</b>
$\leq 300$	$\pm 3$ mm
$> 300$ but $\leq 600$	$\pm 4,5$ mm
$> 600$ but $\leq 900$	$\pm 6$ mm
$> 900$ but $\leq 1\ 200$	$\pm 9$ mm
$> 1\ 200$ but $\leq 1\ 800$	$\pm 12$ mm
$> 1\ 800$	$\pm 1$ %



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#### Amendments Issued Since Publication

Amendment No.	Date of Issue	Text Affected

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